# TATRC:

## Telehealth Applications in Psychological and Neuroscience Treatments

**Force Health Protection**

**August 11, 2010**

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# Agenda

***Overview:*** Colonel Karl Friedl, TATRC Director

***AMEDD Trancranial Doppler Program:*** Dr. Alex Vo

*- BREAK -*

***Army-wide Tele-TBI Network:*** Dr. Francis McVeigh

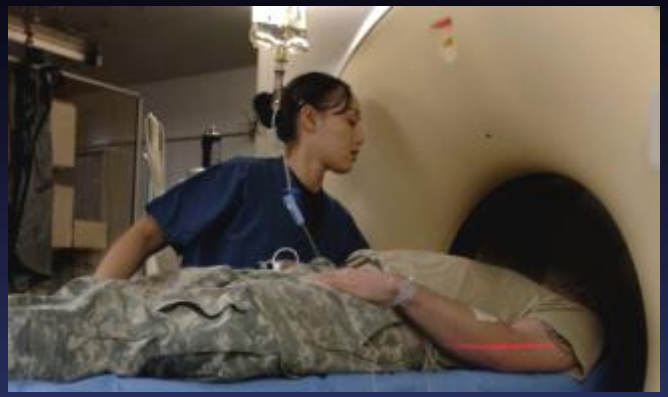
***mCare:*** Ms. Jeanette Rasche & Ms. Holly Pavliscak

*- BREAK -*

***Store and Forward Telepsychiatry:*** Dr. Jay Shore

***Panel Discussion***

# Fulfilling the Vision Thru R&D



## Mission

**Explore science and engineering technologies ahead of programmed research, leveraging other programs to maximize benefits to military medicine**

## Vision

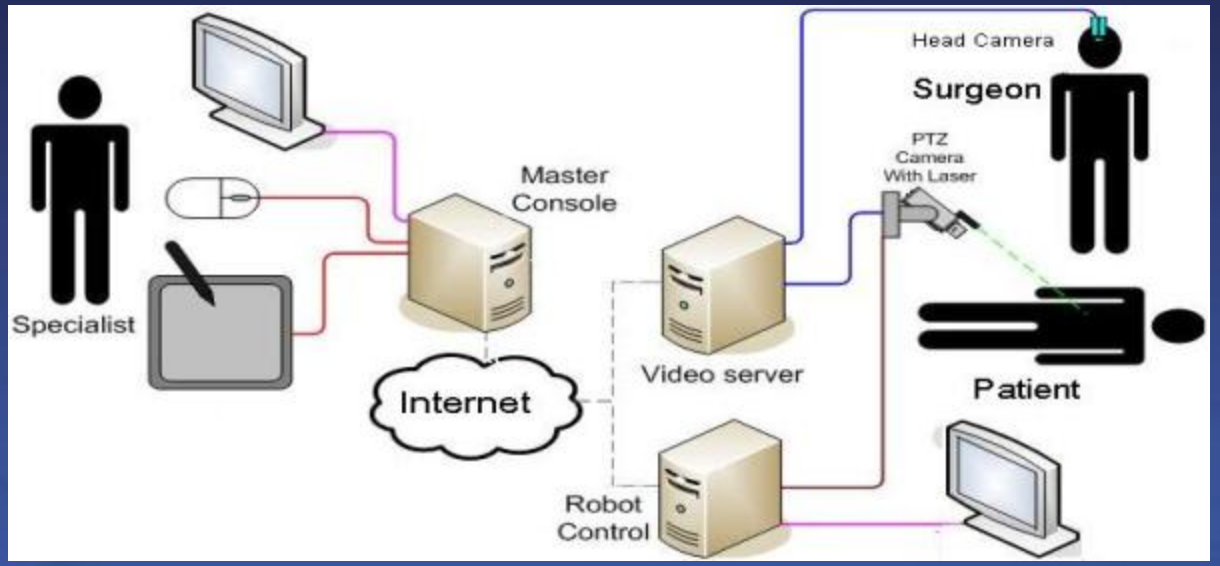
**Be the DoD model of government enablement of technology transfer to use**

# Then…

# Now…

## Remote Surgical Consultation in Military Deployed Environments

- Access to surgical sub-specialists may be limited
- General surgeons face complex injuries that may benefit from sub-specialty expertise

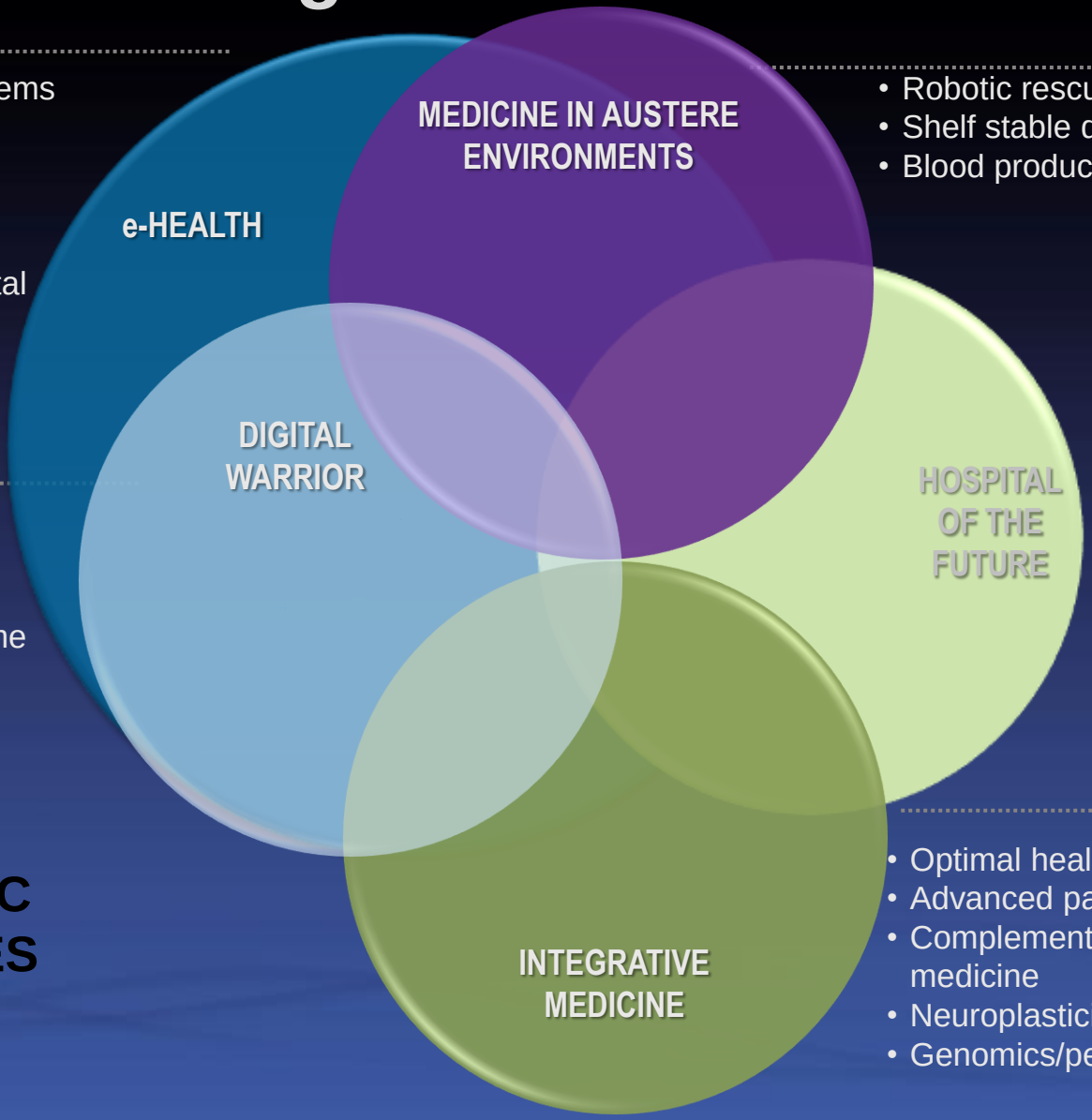




# Fulfilling the Vision Thru R&D

- Cell phone-based systems
- Remote biomonitoring
- Global Biosurveillance

- Health information portal unified EHR
- Research data cube/ medical outcomes
- Pharmacovigilance

- Virtual environments
- Computational models & tools
- Human/soldier phenome
- Performance & injury prediction models




- Robotic rescue & evacuation
- Shelf stable diagnostics & vaccines
- Blood products & blood safety

- Natural orifice transluminal endoscopic surgery
- Advanced medical imaging
- Distance medical training & simulation

- Operating room of the future
- Prosthetics and human performance
- Regenerative medicine & biomaterials

- Optimal healing environments
- Advanced pain management
- Complementary and alternative medicine
- Neuroplasticity/resilience
- Genomics/personalized medicine

**KEY TATRC INITIATIVES**

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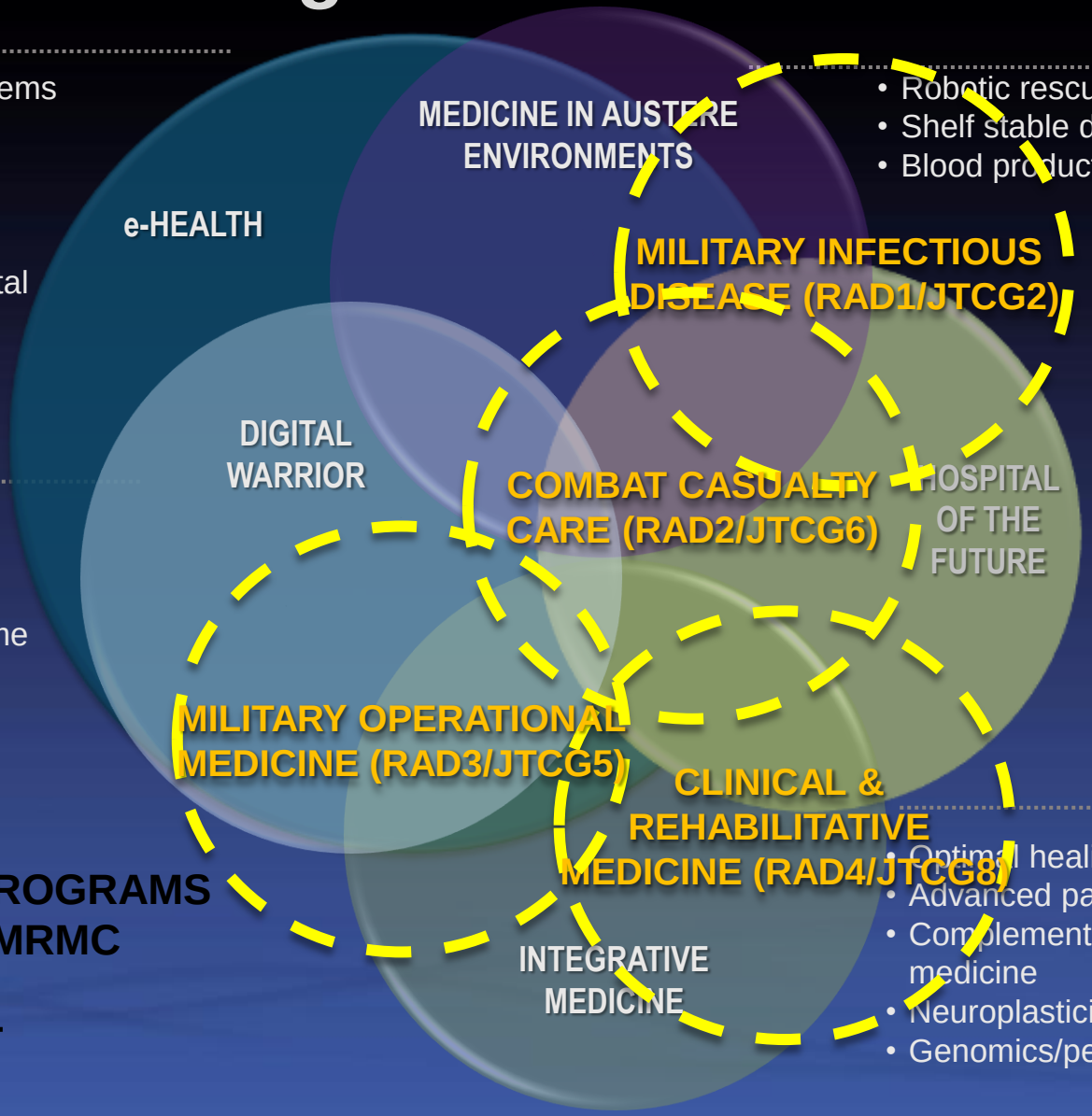


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**CORE TATRC PROGRAMS MAP TO CORE MRMC RESEARCH & DEVELOPMENT**

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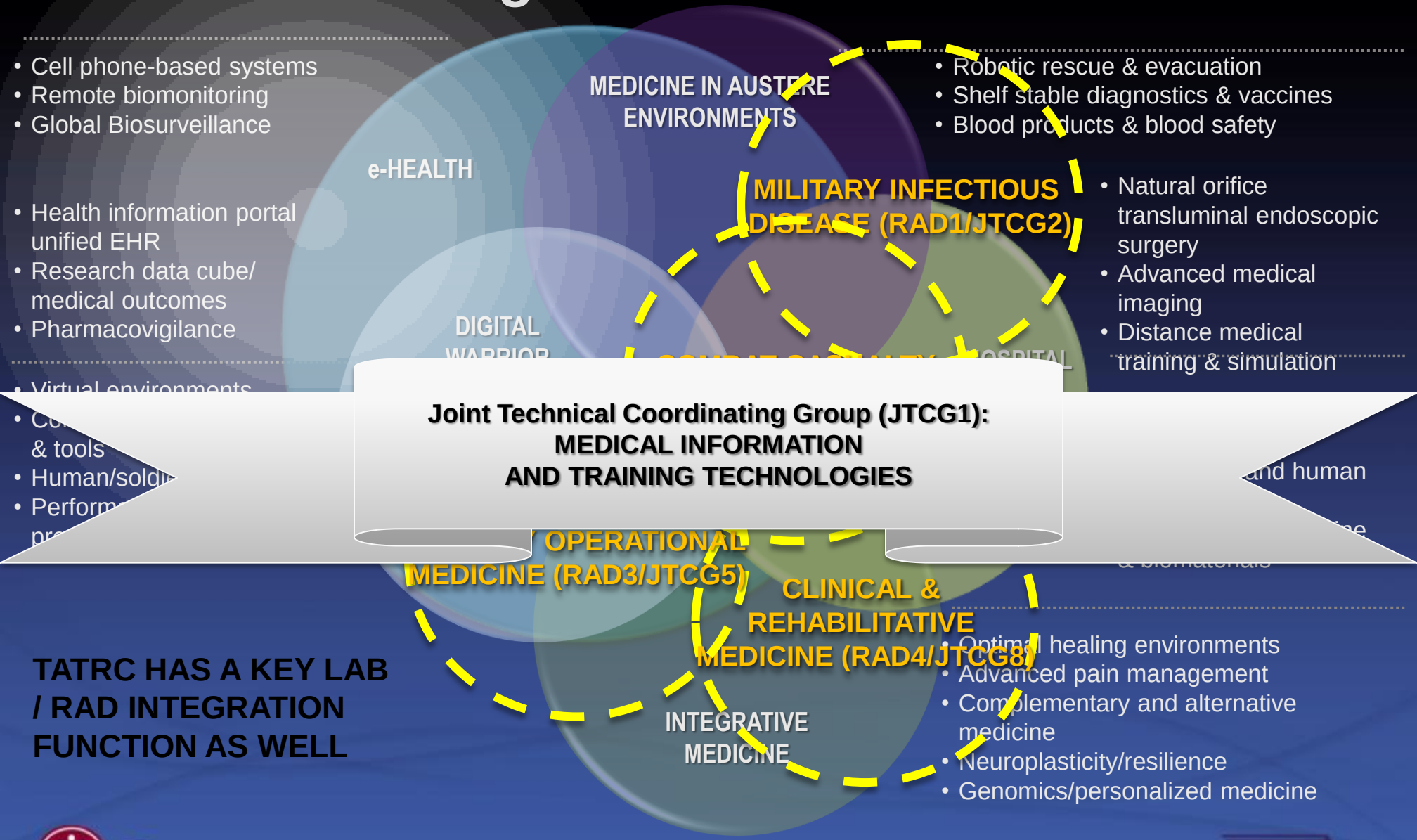
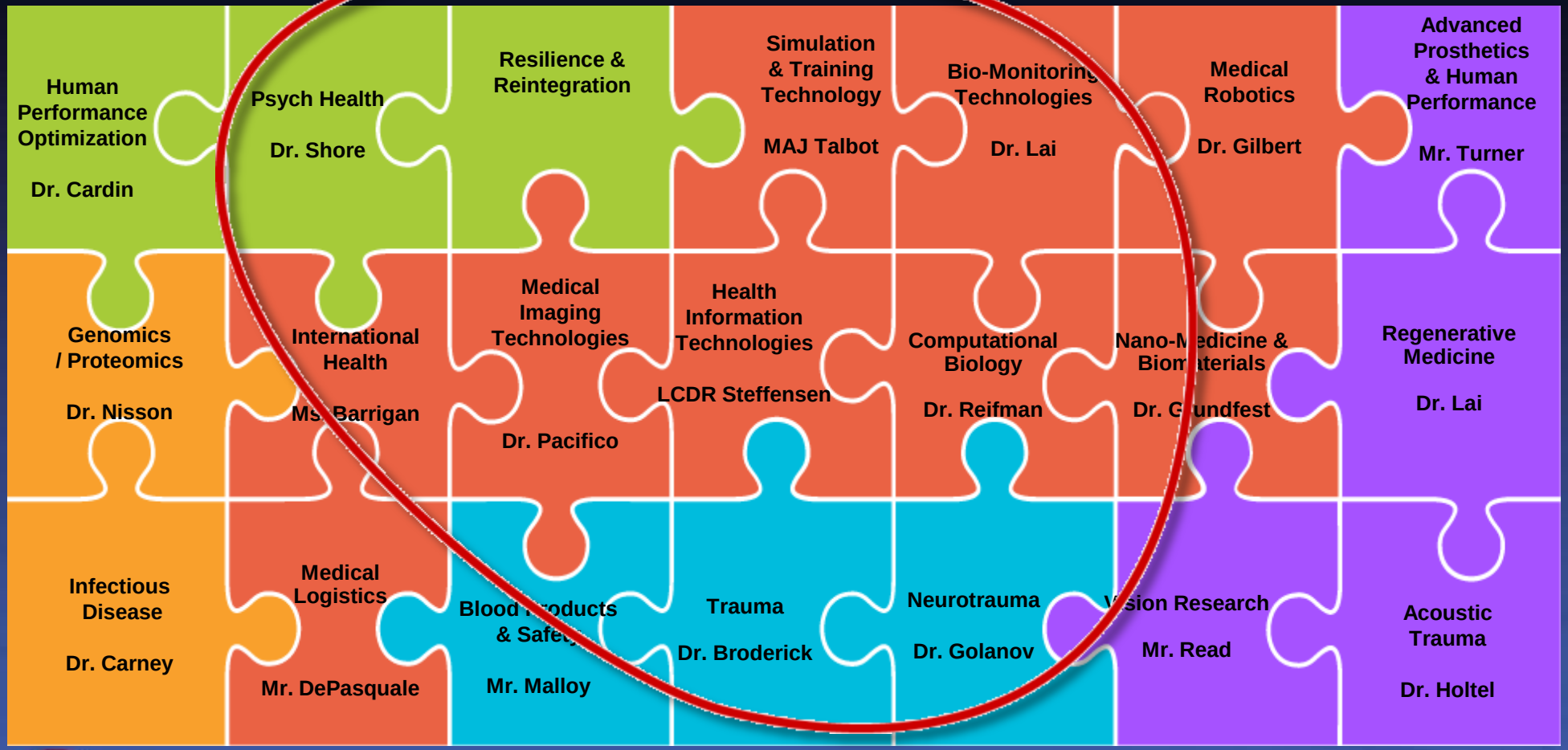



**TATRC HAS A KEY LAB / RAD INTEGRATION FUNCTION AS WELL**

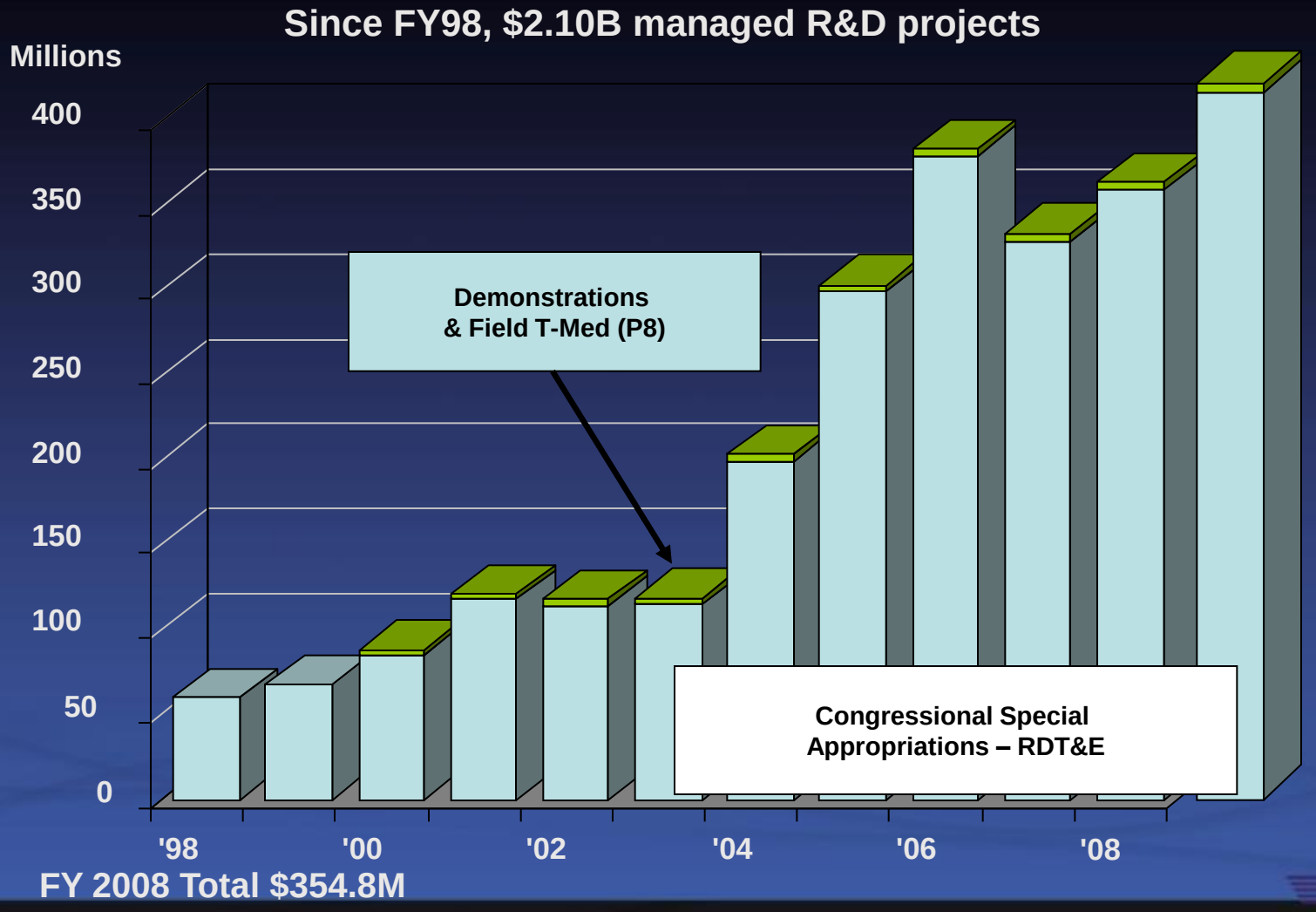
# TATRC Portfolios

Joint Technical Coordinating Group

1. Medical Information & Training Technologies
4. Infectious Diseases
5. Military Operational Medicine
6. Combat Casualty Care
8. Clinical & Rehabilitative Medicine



# TATRC Funding History

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# Strategic Partnerships

## US Military Partners
USAMRMC HQs and Labs
Naval Health Research Center
Army & Navy Medical Centers

## Extramural Partners
Pacific Telehealth & Technology Hui
Center for Integration of Medical & Innovative Technology (CIMIT)
Pain and Neuroscience Center Research (Conemaugh)
UTHSC-Houston
Loma Linda University
Center for Advanced Surgical & Interventional Technology (CASIT)
Samueli Research Institute
Center for Excellence for Remote & Medically Under-Served Areas (CERMUSA)
Windber Research Institute
Joslin Vision Network
Center for Military Biomaterials Research (CeMBR)
Schepens Eye Research Institute
University of Maryland
Ryder Trauma Center

## International Medical Military Partners
France, Germany, UK


## Projects Supported
Norway
Poland
Macedonia
Netherlands
Italy
Austria

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# PH Portfolio Summary

- **Biological**
  - Underlying Mechanisms
  - Medications
  - Brain Imaging
- **CAM**
  - CAM treatments for PTSD
  - Foster Resilience and Reintegration
- **Technology and Telehealth**
  - Innovative Treatments for PTSD
- **Research Centers**
  - VA-DOD Research Collaborations
  - Training Centers
- **Epidemiology**
  - Populations Science with Family and Communities
- **Neurocognitive**
  - Assessment Mechanisms
  - Testing Process and Content

# PH Portfolio Strategic Foci

## Leverage Research and Technology

1) Models to enhance precision in diagnosis, treatment and monitoring of mental health conditions. This includes improving adaption and incorporation of biological and objective assessments of mental health conditions.

2) Extend the mental health workforce available to support service members through training, development, workforce augmentation and innovative models of care delivery.

3) Holistic and health (resilient) based approach to mental health with integration into medical care.

# PH Portfolio Strategic Foci (cont.)

## Leverage Research and Technology

4) Increase focus on group/community impact, support and role in mental health treatment (unit, family, community).

5) Extend mental health treatment and support to forward, remote and austere environment to improve quality of care for populations with access issues (eg. forward deployment, rural Guard/Reserve units).

6) Advance innovations in mental health treatment with emphasis on combining biological and technological approaches.

# Today's Presentations

- Adapt technologies to treatment modalities
- Extend treatments and amplify workforce
- Enable treatments in forward environments